

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MARTIN ANDREW SCHLOSSER,
MARK JAMES BELL, MATTHEW GLEN WHEELER,
DANIEL PATRICK MCNULTY and LELAND CHARLES LEBER

Appeal No. 2006-1166
Application No. 09/994,257

ON BRIEF

MAILED

APR 05 2006

U.S. PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS
AND INTERFERENCES

Before FRANKFORT, OWENS, and BAHR, *Administrative Patent Judges*
OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

This appeal is from a rejection of claims 1, 16, 32, 33, 50 and 51. Claims 2, 11, 20-22, 28 and 29 have been canceled. Claims 3-10, 12-15, 17-19, 23-27, 30 and 31 stand objected to as dependent upon a rejected claim but allowable if rewritten in independent form. Claims 34-49 stand withdrawn from consideration.

THE INVENTION

The appellants claim a method of making a Coriolis flowmeter for measuring the flow of a material having an ultra high level of purity, such as a material used in the fabrication of semiconductors. Claim 1 is illustrative:

1. A method of manufacturing a Coriolis flowmeter adapted to extend a received process material flow having an ultra high level of purity free from contamination due to ion transfer from said Coriolis flow meter to said process material; said method comprising the steps of coupling a flow tube means to a base, wherein said flow tube means is formed entirely from PTFE (polytetrafluoroethylene) or PFA (polyfluoroalkoxy copolymer);

affixing a driver to said flow tube means;

coupling a pick-off means to said flow tube means;
and

affixing inlet and outlet ends of said flow tube means to at least one process connection.⁽¹⁾

THE REFERENCES

Sipin	4,559,833	Dec. 24, 1985
Van der Pol	5,918,285	Jun. 29, 1999
Bitto et al.	6,711,958	Mar. 30, 2004
(Bitto)		(filed Apr. 11, 2001)

¹ In the event of further prosecution, the examiner and the appellants should address on the record whether the appellants' originally filed disclosure provides adequate written descriptive support under 35 U.S.C. § 112, first paragraph, for "PTFE" in claims 1, 50 and 51, and indicates, in accord with 35 U.S.C. § 112, second paragraph, that the recited flow tube and process connections made of PTFE are part of what the appellants regard as their invention.

THE REJECTIONS

The claims stand rejected under 35 U.S.C. § 103 as follows: claims 1, 16, 50 and 51 over Sipin in view of Van der Pol, and claims 32 and 33 over Sipin in view of Van der Pol and Bitto.

OPINION

We affirm the aforementioned rejections. The appellants do not separately argue any of the dependent claims, including claims 32 and 33 to which an additional reference is applied. We therefore limit our discussion to the sole independent claim, i.e., claim 1.

Sipin discloses a "mass flow meter in which a conduit with supported ends is vibrated in a direction transverse to the plane of the conduit, and the force couple about an axis orthogonal to the longitudinal axis of the conduit and also to the direction of vibration is sensed as a measure of the mass flow rate through the conduit" (col. 2, lines 10-16). The conduit is vibrated with respect to a housing (74) by an electromagnetic driver (84), and the inlet and outlet deflections of the conduit with respect to the housing are detected by displacement sensors (86, 88) (col. 6, lines 10-15).

Van der Pol discloses a mass flowmeter which operates according to the Coriolis principle and includes a housing, a thick-walled tube (4), the flow channel of which is a Coriolis measuring tube (1), an oscillation generator (2), and oscillation sensors (3) (col. 1, line 65 - col. 4, line 28). The materials of which the thick-walled tube can be made include metal, metal alloy and plastic, particularly PTFE, PFA or polyether etherketone (col. 4, lines 29-33).

The appellants argue that it would not have been obvious to one of ordinary skill in the art to substitute PTFE or PFA for metal or glass in a Coriolis flowmeter tube because glass and metal have different characteristics than PTFE and PFA (brief, page 5). Sipin does not disclose the material of the conduit. Thus, there is no substitution to be made. One of ordinary skill in the art would have made Sipin's conduit from the materials known to be suitable for making flowmeter vibrating tubes, such as Van der Pol's PTFE and PFA.

The appellants argue that only the thin-walled portions of Van der Pol's tube (i.e., residual portions 6) vibrate and, therefore, Van der Pol does not disclose a flow tube that is made entirely of PTFE or PFA and vibrates along its length (brief, page 6). The appellants' claims do not require that the flow tube vibrates along its entire length, and although Van der Pol discloses that the vibration is measured in the relatively thin residual material area (col. 3, lines 1-3), Van der Pol does not disclose that the rest of the tube does not vibrate, or indicate that a tube that vibrates along its entire length cannot be made entirely of PTFE or PFA.

Moreover, Van der Pol discloses a method for making a Coriolis flow meter comprising coupling to a housing (not shown in the figures) a flow tube (4) made of PTFE or PFA, affixing an oscillation generator (2) (which corresponds to the appellants' driver) to the flow tube, and coupling sensors (3) (which correspond to the appellants' pick-off means) to the flow tube (col. 3, line 65 - col. 4, line 33). Van der Pol's disclosure

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that the device is a mass flow meter (col. 3, line 65) at least would have fairly suggested, to one of ordinary skill in the art, affixing the flow tube's inlet and outlet to process connections. Thus, Van der Pol at least would have fairly suggested, to one of ordinary skill in the art, the method claimed in the appellants' claim 1.²

For the above reasons we are not convinced of reversible error in the rejection of the appellants' claims.

² Van der Pol also discloses the temperature sensor recited in the appellants' claim 32 (col. 4, lines 49-53; figure 7).

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DECISION


The rejections under 35 U.S.C. § 103 of claims 1, 16, 50 and 51 over Sipin in view of Van der Pol, and claims 32 and 33 over Sipin in view of Van der Pol and Bitto, are affirmed.

AFFIRMED

Charles E. Frankfort
CHARLES E. FRANKFORT
Administrative Patent Judge

Terry J. Owens
TERRY J. OWENS
Administrative Patent Judge

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JENNIFER D. BAHR
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